

REMARKS

The Final Rejection is responded to using the same paragraph numbers.

1. The color photographs submitted in the last amendment were not drawings in the application. They were part of Exhibit A, submitted to show the operation of the machine of the invention. Therefore, the requirement for deleting these drawings is unnecessary.

2.&3. Reconsideration is requested to accept the corrected drawing of Fig. 5 which supports claim 9. Reference is made to page 10, lines 20-23 of the Specification, which reads as follows:

Moreover, the access to sharp edges of cutting knives 13 from the access space P is automatically covered by specially designed shield elements, this being important for safety reasons. [emphasis added]

This provides a support basis for the correction to Fig. 5 and for claim 9.

4.&5. Claim 6 is proposed to be amended to retain the broad range of 0° to 15°. The preferred angle of 0° to 10° is now set forth in dependent claim 10. Therefore, claim 6 is now in proper form. Claim 9 is proper for the reasons given above in Paragraphs 2. and 3.

6.&7. Claims 1 and 2 are rejected as anticipated by the WO 89/11803 publication.

8.&9. Claims 3-9 are rejected as being unpatentable over this publication.

In the subject application as set forth in main claim 1, a cutting head (2) rotates in a stationary frame (1) that is fixed to a base. A frame (6) having the transporting feeders is moved toward and away from the cutting head frame (1) on horizontal guides (7) which extend outwardly from the stationary frame (1).

In the WO89/11803 patent there is a stationary support frame 10 on which the transporter mechanism is mounted. There is a movable carriage 20 in which the rotating cutterhead

is mounted. A rectilinear track 23 is mounted to the support frame 10 housing the transporter so that the cutterhead carriage 20 can be moved toward and away from the throat 14 of the stationary transporter from which the tobacco exits. This is the exact opposite of the present invention in which the cutterhead is on a stationary frame.

In WO89/11083 there also is a pneumatic motor 28 that drives a mechanism to move the cutterhead carriage 20 away from the transporter housing 10. Further, there is a mechanism (column 2, lines 24-68) that links the cutterhead carriage 20 to the transporter mechanism so that the cutter drum can be driven in any position of the cutterhead carriage away from the transporter (column 3, lines 1-5). As can be seen, in WO '083 the frame for the cutting head is moved relative to a stationary frame of the transporting and compacting systems. Movement is accomplished by a relatively complex mechanism.

The Examiner basically takes the position that it makes no difference as to whether the frame holding the transporting mechanism or the cutterhead is moved. Applicant submits that (1) the invention as claimed is not anticipated by WO '083 nor (2) are the claims obvious over it.

In a machine of the type at issue, it is not merely a matter of what moves and what stays idle. In the present invention, it is a matter of a novel functionality of known assemblies (a main frame made to be stationary for holding the cutterhead and a frame with the feeding-compacting arrangements made to be movable) that produces novel features of safety and ease of operation. The novel feature of providing the sliding rails for the feeding-compacting arrangements in the machine of the invention has the following novel features and advantages:

1. The rotating cutterhead drum with the attached grinding unit are the heaviest parts of the machine. They have to be maintained and serviced very frequently, usually a few times a day. In the present invention, it is easy to obtain access to the cutting head, merely by pulling the transporting mechanism away from it. The transporting arrangement is of lesser weight than the cutting head. Current machines on the market, including that of the reference, WO89/11083, do not allow for easy and safe access to both sides of the cutting drum. In current machines, an operator has to climb/jump over the rails to get into the space between them to access the cutterhead.

In WO89/11803, access to the cutterhead is difficult/impossible due to slide rails extended from the floor to approximately 1m in height. Also, a relatively complicated arrangement is needed to move the heavy cutting head. In daily practice, the sliding rails are there but their functionality is limited (and different from those of the subject invention). With the arrangement of WO '803, it also is difficult to access assemblies between the drum and the feeding-compacting arrangements.

2. Also, the design shown in WO89/11803 is not as practical as that of the invention. Further, it is more difficult to operate in daily use.

The Examiner should note that in WO89/11803 agricultural organic material, especially tobacco, being fed from above the rails will fall on the rails when the machine is opened, i.e., cutterhead out in service mode. Simple operation of opening the cutter in WO89/11803, i.e., creating access space between the drum and the feeding-compacting arrangements results inevitably in polluting the rails. The product that falls out of the cutterhead is spread all over when the cutterhead is moved to the open position. The discharged product imposes the necessity of cleaning the surrounding area and the machine prior to re-assembly.

In the machine of the subject application, access space P allows direct access from floor level both to the drum and to the feeding-compacting arrangements. The Examiner should note that ergonomics and safety of operators are the highest priority here. Such approach is novel in itself. Also, the construction of the machine of the invention allows for immediate assembly of the drum and the feeding-compacting arrangements resulting in increasing productivity due to much shorter down time on the machine. Any spillage of the agricultural products can be conveniently collected in a bin located underneath the mouthpiece assembly (see Fig. 4, items 11, 12). This reduces cleanup time and effort needed.

3. In WO89/11803, cutterhead (22), assembled in the frame (20) is movable along the rails. It should be noted that the product being processed is to be collected to a collector (not shown in the drawings), located in between the supporting legs, actually under the roller 32.

Again, the novel concept of the machine of the claims of the subject application allows every service/maintenance operation to be carried out outside the aforementioned collector. This is a vital feature for the machine as foreign bodies may fall into the collector with the cut product. This feature is highly appreciated by the customers who understand that it is unattainable in other machines such as the one in WO89/11803. In other words, either in operation mode or in service mode, the cutter in the machine of the subject application does not allow for any foreign bodies to fall into the collector because the collector is located under the fixed frame of the rotating drum.

4. Unlike other machines, in the present invention the frame for the rotating cutterhead drum is fixed to the ground. Therefore, vibrations are not transferred to other assemblies on the machine. The drum with the integrated grinding unit are the heaviest parts of the machine. Making their supporting frame fixed, i.e., unmovable, allows for bringing novel functionalities (examples above) to reality.

Accordingly, claim 1 is clearly not anticipated by WO89/11803 and should be allowed.

Claim 2 depends from claim 1 and specifically recites that the cutting head has a horizontal axis of rotation.

Cutting machines, especially for tobacco, do not allow this feature in practice. The problem was never overcome due to the following reasons:

A movable cutterhead can impose limitations on drum size (mass). A small mass is desirable, otherwise operators would not be able to open/service the unit. But a small mass for the cutter drum means low inertia of the drum and the low inertia does not allow for quality cut of the agricultural organic product (especially tobacco). This leads to a necessity to tilt the drum at an angle to lower cutting forces. Minimizing cutting forces does not allow for a horizontal axis of the drum.

The construction of the machine of the invention allows for use of a large cutterhead since such head is in a stationary frame and is not moved. The horizontal axis of rotation allows for a smooth cut of the material. This novel arrangement is set forth in claim 2. Therefore, claim 2 also is patentable and should be allowed.

Claim 7 depends from claim 1 and further sets forth that the rails (7) are placed over (above) the feeding-compacting arrangement frame. This more specifically defines the novel feature of the invention of being able to move the feeding-compacting arrangement away from the (heavier) main frame. This feature obviously is not found in the WO89/11803 publication.

Claim 9 depends from claim 1 and defines the shield element for the cutting knives on the side of an access panel (P) on the main frame to the cutting head. This feature also is not found in the WO89/11803 publication. It is not seen how a shield could be used in the machine of the WO89/11803 publication.

As to claims 3-6, the features of these claims allow for employing dual knife advance mechanisms (located on both sides of the cutterhead) and this in turn allows for the novel operational feature of:

Mode 1: only one set of knives is in operation with either 8, 4, 2 or 1 knives in operation. Results in even cutting (as in every known cutter).

Mode 2: two sets of up to 16 knives in operation: 16, 8, 4, 2 or 1 knives in operation. Results in even cutting (as in every known cutter).

Mode 3: two sets of up to 16 knives in operation: 16, 14, 12, 10, 8, 6, 4, 2 or 1 knives in operation. Results in uneven cutting - this is unique, novel feature that allows specific adjustments of the product cut width, depending on blend composition. This is not possible with any other cutterhead arrangement.

In view of the allowability of claim 1, from which these claims depend, claims 3-9 and new claim 10 also should be allowable.

The amendment should be entered since it clearly places the application in condition for allowance. It shows that the Examiner may not have properly considered the invention and the prior art. The informalities of the claims have been addressed. No amendments have been made to the claims which might possibly be considered to have raised a new issue.

Accordingly, the amendment should be entered and the application passed to issue.

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If the amendment is not entered as placing the application in condition for allowance, then its entry is requested for purposes of appeal.

Prompt and favorable action is requested.

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